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MAR 21 2006

March 21, 2006

From:	JAMES F. THOMPSON, ESQ.	Our Reference No.:	1002-009.004	
	BAINWOOD, HUANG & ASSOCIATES, LLC	Your Reference No.:	10/622,403	
Please deliver the following <u>10</u> Pages, Including Cover Page to the following Recipient				
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ATTORNEY DOCKET NO.: 1002-009.004

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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MAR 21 2006

Applicants: Richard C. Slater
Serial No.: 10/622,403
Title: COHERENT BEAM COMBINATION
Filing Date: July 18, 2003
Examiner: Van Roy, Tod Thomas
Art Unit: 2828
Conf. No.: 4136

Certificate of Mailing Under 37 C.F.R. §1.8

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Date: March 21, 2006

By: Lynn F. McMiller
(Typed or printed name of person mailing
Document, whose signature appears below)

Signature: 

Office of Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION TO VACATE PREMATURE FINALITY
OF AN OFFICE ACTION

Sir or Madam:

Applicant hereby requests that the finality of an Office Action mailed January 26, 2006 be vacated as being premature.

Regarding when a second office action can properly be made final, MPEP § 706.07(a) states the following:

Furthermore, a second or any subsequent action on the merits in any

U.S. Application No.: 10/622,403Attorney Docket No.: 1002-009.004

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application or patent undergoing reexamination proceedings will not be made final if it includes a rejection, on newly cited art, other than information submitted in an information disclosure statement filed under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17 (p), of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art. (Emphasis added)

The Office Action of January 26, 2006 (copy enclosed) includes a new rejection of claim 1 under 35 U.S.C. § 102(b) based on Seguin, US 5,210,768 (see page 6 et seq.). Claim 1 has not been amended in this application, as evidenced by the previous response submitted November 18, 2005 (copy enclosed). Because the rejection based on Seguin is a new rejection of unamended claim 1, the Office Action should not be final under MPEP §706.07(a).

Applicant's representative requested withdrawal of the finality of the Office Action in separate telephone calls to the Examiner (Mr. Tod Van Roy), the Examiner's supervisor (Ms. Minsun Harvey) and to Director Robert Oberleitner of TC 2800 on the dates of March 17, 2006 through March 21, 2006. Ms. Harvey and Mr. Oberleitner both stated that the new rejection was necessary for dependent claims 30-35 which had been added in the previous response, and also pointed out that an original rejection of claim 1 and other claims had been maintained. Applicant's representative pointed out that neither of these facts is mentioned as an exception in MPEP § 706.07(a). Moreover, MPEP § 706.07(a) specifically allows for the situation in which the claims are amended to require newly cited art, which is the action taken in the previous response. Thus, in Applicant's view the action by the Examiner is in direct contravention of MPEP § 706.07(a) and should be vacated.

Based on the above, it is respectfully requested that the Examiner's action of making the Office Action final be vacated and that prosecution of this application proceed on a non-final basis.

Applicant hereby petitions for any extension of time which is required to maintain

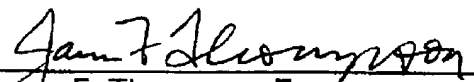
U.S. Application No.: 10/622,403Attorney Docket No.: 1002-009.004

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the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-3661.

If the enclosed papers or fees are considered incomplete, the Mail Room and/or the Application Branch is respectfully requested to contact the undersigned collect at (508) 616-2900, in Westborough, Massachusetts.

Respectfully submitted,


James F. Thompson, Esq.
Attorney for Applicant
USPTO Registration No.: 36,699
Bainwood, Huang & Associates, LLC
Highpoint Center
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Attorney Docket No.: 1002-009.004Dated: March 21, 2006



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,403	07/18/2003	Richard C. Slater	TXT05-06	4136
57604	7390	01/26/2006		
DAVID E. HUANG, ESQ. BAINWOOD HUANG & ASSOCIATES LLC 2 CONNECTOR ROAD SUITE 2A WESTBOROUGH, MA 01570				
EXAMINER VAN ROY, TOD THOMAS				
ART UNIT		PAPER NUMBER		
2828				

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,403

Applicant(s)

SLATER, RICHARD C.

Examiner

Tod T. Van Roy

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-35 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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said expanded first electromagnetic field with said expanded second electromagnetic field (accomplished through the in-phase reflections through the gain media).

With respect to claim 25, Vetrotec discloses the method as outlined in the rejection to claim 24, and further discloses the output beam to be a function of the product of the amplitudes generated by each gain element ([0068], beam being amplified at each gain element in the series, product of the amplitudes then output at end of the resonator).

With respect to claim 27, Vetrotec discloses the method as outlined in the rejection to claim 24, and further discloses producing and expanding at least a third electric field in the resonator (produced by gain medium 3 in the series).

With respect to claim 28, Vetrotec discloses the method as outlined in the rejection to claim 27, and further discloses coherently combining the third field with the first two fields (accomplished through the in-phase reflections through the gain media).

With respect to claim 29, Vetrotec discloses the method as outlined in the rejection to claim 24, and further discloses removing heat from the gain media ([0090-91], in heat conducting Al frame, with coolant lines run throughout).

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 24, and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Seguin (US 5210768).

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With respect to claim 1, Seguin discloses a system for coherent beam combination comprising: an unstable resonator (fig.5), at least two gain media located within said unstable resonator (fig. #'s 10); wherein a first electromagnetic field produced by a first gain medium of said at least two gain media propagates through a portion of a second gain medium of said at least two gain media after one or more roundtrips within said unstable resonator (fig.5, first field produced at gain medium one, proceeds then to gain medium two); wherein said first electromagnetic field is in-phase with a second electromagnetic field produced by said second gain medium (abs., fields in phase as the successive gain material is of the same type, leading to equal amounts of optical delay for both entering and exiting each gain region, keeping the fields in phase).

With respect to claim 24, Seguin discloses a method for coherent beam combination comprising the steps of: producing a first electromagnetic field from a first gain medium; producing a second electromagnetic field from a second gain medium (fig.5, fields produced by pumping the gain media, then being reflected through successive gain media); expanding said first and said second electromagnetic fields in an unstable resonator having a magnification factor (inherent in an unstable resonator, see applicant's spec [0020]); and coherently combining said expanded first electromagnetic field with said expanded second electromagnetic field (abs., accomplished through the in-phase reflections through the gain media).

With respect to claims 30-35, Seguin further discloses the at least two gain media are placed in a plane transverse to a longitudinal axis of the unstable resonator,

ATTORNEY DOCKET NO.: TXT05-06

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No.: 10/622,403
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Examiner: Tod Thomas Van Roy
Art Unit: 2828
Conf. No.: 4136

A rectangular stamp with the words "FILE COPY" in a bold, sans-serif font. To the left of the text is a small icon of a file folder.Certificate of Mailing Under 37 C.F.R. §1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: **MAIL STOP AMENDMENT**, Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on:

Date: November 18, 2005

By: Penny A. Coelho
(Typed or printed name of person mailing
Document, whose signature appears below)

Signature: 

MAIL STOP AMENDMENT
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

AMENDMENT

Sir:

In response to the Office Action mailed August 18, 2005, please amend the above-identified Application as follows:

U.S. Application No.: 01/622,403Attorney Docket No.: TXT05-06

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IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the Application:

LISTING OF CLAIMS:

1. (Original) A system for coherent beam combination comprising:
 - an unstable resonator;
 - at least two gain media located within said unstable resonator;
 - wherein a first electromagnetic field produced by a first gain medium of said at least two gain media propagates through a portion of a second gain medium of said at least two gain media after one or more roundtrips within said unstable resonator; wherein said first electromagnetic field is in-phase with a second electromagnetic field produced by said second gain medium.
2. (Original) The system of Claim 1, further comprising an output beam exiting said unstable resonator.
3. (Currently amended) The system of Claim ~~3~~Claim 2, wherein said output beam has an intensity proportional to an amplitude product squared, said amplitude product being an amplitude of said first electromagnetic field multiplied by an amplitude of said second electromagnetic field.
4. (Original) The system of Claim 1, wherein said at least two gain media are laser gain media.
5. (Original) The system of Claim 1, wherein said at least two gain media are parametric gain media.